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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/807,297 | '08/13/2001 | Kia Silverbrook | 360040 | 6041 |

7590 04/23/2003
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EXAMINER

DO, AN H

ART UNIT PAPER NUMBER

2853

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,297

Applicant(s)

SILVERBROOK, KIA

Examiner

An H. Do

Art Unit

2853

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 130-137 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 130-137 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

This is the third Office Action on the merits responsive to the filing of the pending application.

Terminal Disclaimer

1. The terminal disclaimer filed on 12 February 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent No. 6,273,544 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 130-133 are rejected under 35 U.S.C. 102(e) as being anticipated by Silverbrook et al (US 6,260,953 B1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 130, Silverbrook et al discloses in Figure 5 an inkjet printhead having a series of nozzles (1) of the ejection of ink wherein each of said nozzles (1) has a rim (4) formed by the deposition (Figure 14) of a rim material layer (51) over a sacrificial layer (50) and a subsequent planar removal of at least said rim material layer so as to form said nozzle rim (Figure 15).

Regarding claim 131, Silverbrook et al also discloses in Figure 10 said planar removal comprises chemical-mechanical planarization (column 7, lines 59-61) of said rim material layer (4).

Regarding claim 132, Silverbrook et al further discloses parts of said sacrificial layer are also removed by said planar removal (column 8, lines 18-24).

Regarding claim 133, it is also disclosed that the planar removal process is an etching process (column 7, lines 63-64).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 134-137 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silverbrook et al (US 6,260,953 B1) in view of Tsu et al (US 6,294,420 B1).

Silverbrook et al discloses the claimed invention except for reciting the rim material layer comprises TEOS glass, Si_3N_4 , MOCVD and ECR CVD TiN.

Tsu teaches the material layer comprises TEOS glass (column 5, lines 64-67 and column 6, lines 1-5), Si_3N_4 (column 1, lines 23-27), MOCVD (column 3, lines 52-55) and ECR (column 1, lines 40-44) CVD TiN.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a variety of techniques to deposit materials, as taught by Tsu et al, for the purpose of obtaining a good oxidation resistance and a high work function as noted in column 2, lines 50-59 of Tsu et al.

Response to Arguments

6. Applicant's arguments with respect to claims 130-137 have been considered but are moot in view of the new ground(s) of rejection.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to An H. Do whose telephone number is 703-308-0525. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Russell E. Adams can be reached on 703-308-2847. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-305-3431 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

A handwritten signature in black ink, appearing to read 'An H. Do', with a long horizontal stroke extending to the right.

An H. Do
April 18, 2003